Fads and Hobbies or Lessons Learned? An Analysis of the U.S. Army Wartime Lessons Learned Program

A Monograph
by

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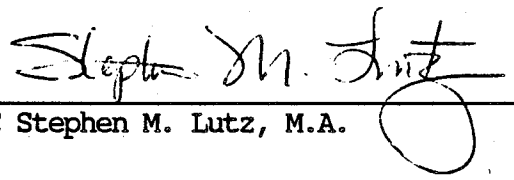

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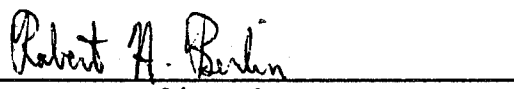

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ABSTRACT

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This study examines the effectiveness of the U.S. Army Lessons Learned Program in synthesizing battlefield observations into evolving future doctrine. The wartime learning of lessons constitutes more than a recognition of prevalent observations from a recent conflict. It is a complex system that processes raw observations into a meaningful form and reintegrates the observation back to the field army through changes in doctrine, organization, or equipment.

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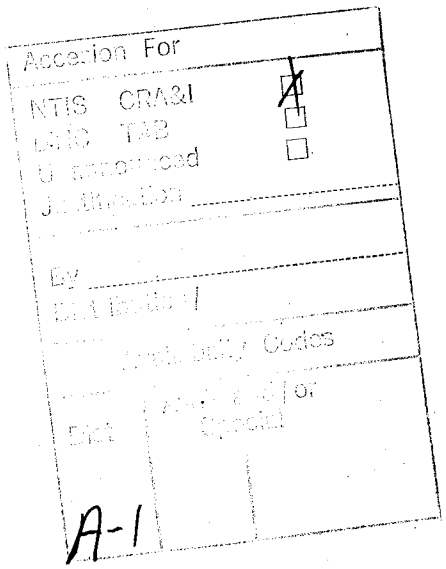

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> We as a nation, are apt to boast...that our Army loses every battle except the last one...[this] means that ninety per cent of our time spent in fighting was pure waste of effort, and that it could have been saved...had we only been prepared to fight the first battle as we fought the last one.[1]

I. INTRODUCTION

Major General J.F.C. Fuller made these remarks in a critique of the British Army, but the ability to learn the lessons of the battlefield has universal application. One common criticism offered by historians in the examination of an army's failures is a failure to learn the lessons of past conflicts. It is also a truism that historians offer few alternative means of addressing the problems inherent in translating war experiences to tactical solutions in the near term. Army establishments throughout time have sought to develop systems to resolve this problem and craft viable tools for future use from their collective wartime experiences.

The wartime learning of lessons constitutes more than a mere recognition of relevent observations from a recent conflict. Learning lessons is a communicative process that moves from battlefield observation through an integrative system, which in the absolute, returns to the soldier on the battlefield as a product designed to improve performance. The relative vitality of two competing lessons-learned systems in war is in actuality a contest of perceptual speed. As Professor Michael Howard has suggested, it is this contest that will go a long way in separating success from failure on a future battlefield.[2]

The importance of a lessons-learned system is compounded for the U.S. Army because the certainty of the shape of future war has disappeared with the collapse of the bi-polar world. In this environment of incertitude and ambiguity, in which there are no clear strategic benchmarks, the relevance

of an effective system of learning tactical lessons is magnified. The changing strategic landscape, besides exacerbating the ability to rapidly incorporate lessons, has clouded the future roles and missions the military establishment will be required to confront. Coupled with increasingly contrained resources, the need for an effective learning system has become more critical, in direct correlation with the expanded level of uncertainty about the future.

This study examines the current U.S. Army system for the analysis and adoption of lessons drawn from the experiences of war. Additionally, the study analyzes the development of the U.S. Army lessons-learned system and examines the question: Does the U.S. Army have an effective process for translating wartime tactical lessons into evolving future doctrine?

The means to answer this question lies in a comparative analysis. Through a survey of literature, this study defines an initial set of criteria, essential to an effective lesson-learning model. The set of criteria is tested through an historical analysis of four case studies—two models of learning during wartime, and two models of learning following the conclusion of conflict. In the first category, the selected cases are the 1939 Polish Campaign by the German Army and the U.S. Army 1943 Italian campaign. The second category consists of the British Army following the Boer War, and the U.S. Army after Operation Desert Storm. Based on this analysis, the study modifies the initial criteria, as required, and compares the model with that currently utilized by the U.S. Army. The end result is an assessment of the current system in its ability to analyze the past and provide a product that will assist the Army in preparing for the future. As historian Michael Howard commented:

> You cannot get away from the study of the past. It is the only knowledge we have. You have to serve it with the salt and pepper of caution and prevarication, but still it is the only material on which...[one] has to work. Even those contemporary American military analysts who profess to disdain historical precedent and to work in terms of mathematics must still base their conclusions on human reactions under certain conditions, and only the records of the past show what these are.[3]

Before turning to the specifics of the U.S. Army system, it is necessary to define the terms utilized in this study. In current usage, the word "lesson" has become associated with a reading or lecture. The U.S. Army Center for Army Lessons Learned (CALL) defines the difference between a "lesson" versus a "lesson learned" in terms of an quantifiable change in behavior.[4] While in the semantics of the Army, "lesson" seems inextricably linked with "learned," its usage in the research implies a quality of learning gained by experience, study, or observation. As historian Jay Luvass has observed:

> Today, even the term lesson has become obsolete; lessons learned is the current catch-phrase for the inevitable lists of observations that accompany most accounts of the latest military endeavor as the gaze of soldiers everywhere shifts from one war to the next...[5]

This study will focus on the lessons drawn from wartime experiences, as opposed to observations drawn from peacetime military operations and training exercises. Current U.S. Army doctrine separates combat lessons from wartime lessons, with the former including any observation, regardless of source, that holds some degree of utility for application during war. The latter includes observations drawn from "actual combat experiences involving U.S. forces during major conflict."[6] This monograph looks at the processing of lessons drawn from the experiences of war during the conduct of actual combat operations and in the aftermath of conflict.

Perhaps the most salient point that this study grapples with is the measure of effectiveness achieved by the historical case models and the current system utilized by the U.S. Army. While the current Army Lessons Learned System measures effectiveness with respect to changes in the collective behavior of the Army, additional modifiers may be warranted to ensure that the Army is not only incorporating the right lessons, but is doing so in a timely manner. Throughout the examination of the subject, this study, in large part, attempts to provide a definition of effectiveness. In the following section, the initial set of criteria used to intepret the effectiveness of a system is addressed, but will, of necessity, be subject to modification. At the conclusion of the study, this refined set of effectiveness criteria is used to measure the current U.S. Army system. The conveyance of wartime lessons within an army, in large measure, can eliminate the cost incurred by repeating the same errors again on a future battlefield. It is this condition described by J.F.C. Fuller (in relation to the British Army) that one must seek to avoid:

> Each war we wage starts in pitch darkness. We grope about blindly for success, and each failure to produce a little light accentuates the blowing.[7]

II. METHODOLOGY

The purpose of determining the lessons of war has a very practical aim. It is simply to improve an army's performance in the accomplishment of future missions. To this end, one may be tempted to remark that the U.S. Army has learned its most crucial lesson. The U.S. Army has accepted the utility of pursuing the wisdom gained from the analysis of past experience. Acknowledgement that the need exists for a systematic means of

gathering the lessons of combat is a relatively new phenomenon. Within the Army, a permanent organization and system for the gathering and interpretation of peacetime and wartime lessons was not established until 1985. In that watershed year, the Army created the Army Lesson Learned Program and designated the CALL as its focal point.[8]

The current U.S. Army program developed under the auspices of CALL is very straight forward. At its root is a system consisting of four components that move the observation from the battlefield, through an intergrative process, and back to the Army in the form of synthesized information (Figure 1). These four components are: 1) collect, 2) process, 3) analyze, and 4) disseminate. Using this system, CALL contends that it provides "lessons about the smart way of doing business, i.e., what works and what doesn't."[9]

Each element of the system is advertised as a means to break down collective behavior into its subordinate relevant pieces. In doing this, the system is able to attack the larger behavior in order to modify perceived errors in collective activities. In the Collect phase, the system focuses on gathering hard data. The means to collect data is a three legged structure. The primary leg is the use of Combined Arms Assessment Teams (CAAT). The CAAT is a task-organized group consisting of "subject matter experts" (SME) drawn from the Army-at-large and headed by a representative of CALL.[10] The team is assigned or attached to a field headquarters under the staff responsibility of the Operations section (G3).

The second vehicle used to collect wartime data is the input from Army units and agencies by means of After Action Reports (AAR). Within the framework of AR 11-33, Army Lessons Learned Program, units are

charged with resourcing and conducting the internal collection of lessons from battlefield experiences. The third significant player in the collection process is the U.S. Army Center for Military History (CMH). Through unit historians and Military History Detachments, CMH conducts research on topical issues relevant to the Army in the form of historical studies. CMH also provides unit Command Reports to CALL as another possible source of insight into lessons drawn from the recent past.

The Process and the Analyze phases of the lessons learned model formally occur at two locations. The Process phase involves the collating of raw data into computer data banks, providing ready access to Army users worldwide. The Analysis phase is the separation of the raw observations collected from the field into its individual piece parts. Once a problem is broken into its component parts, alternative solutions are offered for future use.

The first process and analyze location is at CALL, where staff operations analysts interpret material gathered from the aforementioned sources and synthesize lessons to be returned to the Army-at-large. The Army's historic community is the second location where interpretation of material occurs. Researchers designated or drawn from CMH conduct analysis of the events of battle, in an attempt to place lessons within the framework of historic context.

CALL and CMH have similar charters in terms of extracting the lessons of the battlefield, but each agency takes a decidedly different approach to the mission. At CALL analysts examine each problem largely in isolation, providing a description of the problem, a discussion of circumstances surrounding the observation, and a conclusion in the form of suggested alternative solutions. The CMH form of analysis is the historic case

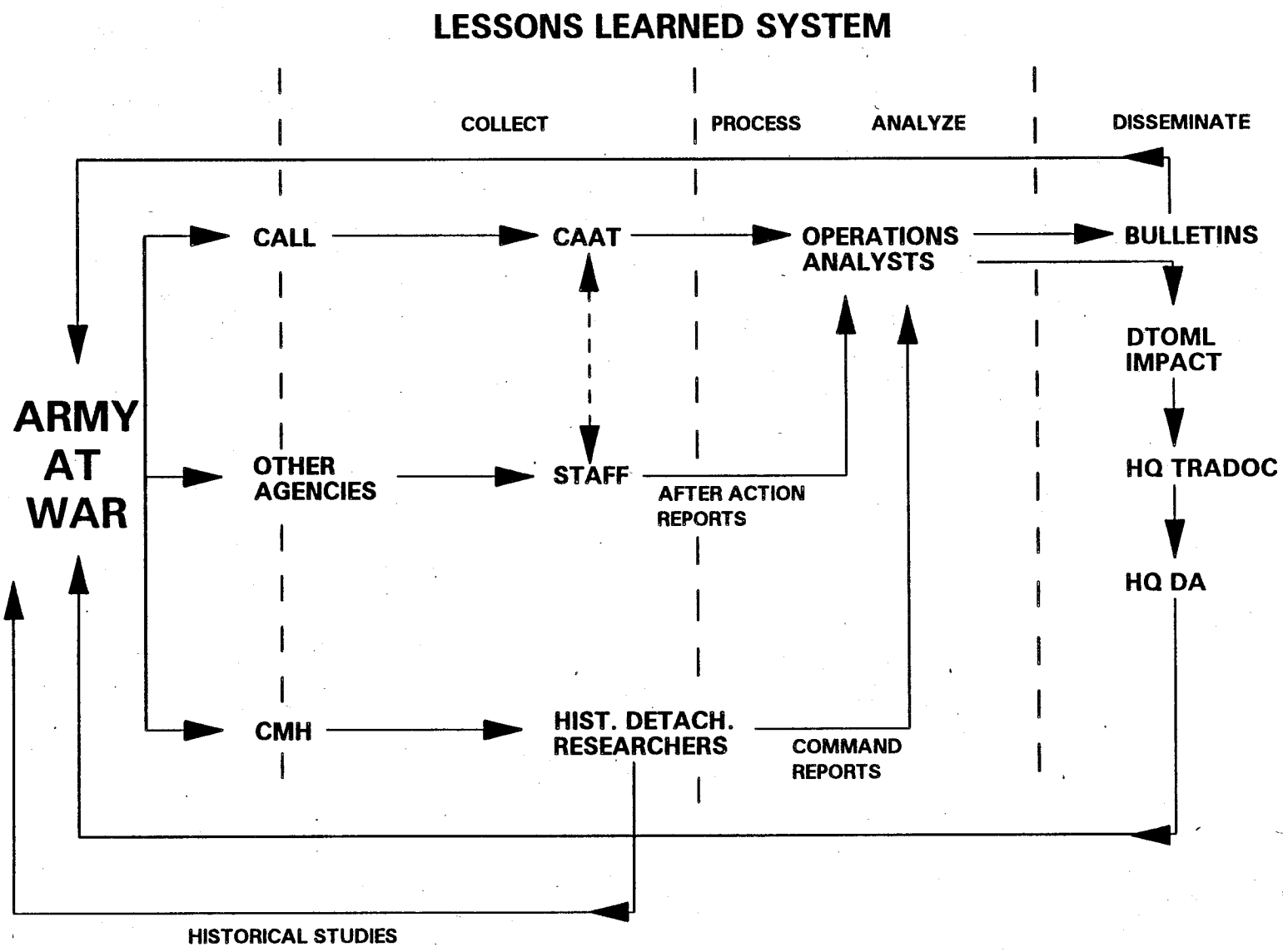

Figure 1: Lessons Learned System

study, or narrative. The quality and format of the historic studies vary between authors, but generally take a wider view and examine the battlefield more as a whole, rather than as a series of separate events.

The last phase of the formal Lessons Learned system is Disseminate. This phase returns the lesson to the Army in three ways. First, if the lesson is considered a routine observation, CALL returns the lesson in the form of bulletins or newsletters. Secondly, if CALL identifies a lesson that would require change to doctrine, training, organization, materiel, or leadership (DTOML) aspects of Army operations, the lesson is forwarded through Headquarters, U.S. Army Training and Doctrine Command (TRADOC) for implementation, with approval of the Chief of Staff of the Army (CSA). The lesson, with DTOML-impact, returns to battlefield units indirectly in the form of a major change to the way Army conducts business. The third form that returns lessons to the field Army are the history products of CMH. The historical studies include general lessons from a specific battlefield and larger issues addressing changes to the conduct of war.

This completes the formal articulation of the U.S. Army Lesson Learned System. An astute observer may note the lack of a separate fifth step involving the assessment of the organization in inculcating the output of the system--the lesson. This assessment is a matter of specified command interest within the organization. CALL has performed reviews of doctrinal literature, as directed, to evaluate the incorporation of lessons into field manuals. The process of evaluating an organization's ability to learn the identified lessons of the battlefield recycles back through the same system. This point provides a lead into an examination of the entire mechanism of the system and a search for a specific criterion to measure its success.

An initial survey of material has rendered five criterion essential to an effective model: timeliness, context, essence, integrative, and utility. Each will be used to measure the effectiveness of four armies in learning from war experiences in the selected case studies. Perhaps the criteria will serve to illuminate the degree of success achieved within the current U.S. Army system. As an anonymous British officer observed, "the greater amount of truth likely to be garnered, and the less the chance of 'fads' and 'hobbies' getting the upper hand."[11]

"Timeliness" is the measure of speed an observation transitions from the battlefield through the process that translates it into a usable form, to become internalized within the organization of the army. But how fast is fast? The answer rests in the controversy over whom is best suited to interpret the utility of observations for an army. Professor Bruce W. Menning, in his study of the pre-World War One Russian Army, describes this dilemma: "...muddying the water were extraneous 'we-they' issues and genuine misperceptions about roles played by institutions, history, and ideas in doctrinal development."[12]

The debate is, as yet, unanswered. At one end of the spectrum a group of historians warn of extracting lessons that may not stand up to long term perspective. At the other end are practical minded soldiers who seek simple and direct answers immediately. As an initial benchmark the study offers the same figure that General Vasilii Iosifovich Gurko set in 1906--three years.[13] Given the average turn around time of five years for the publication of a U.S. Army field manual, this seems an ambitious suspense.

The second criterion used to evaluate the relative merits of a learning system is "context." In the adaptation of lessons from a

battlefield, a system must illustrate the unique circumstances from which each observation is drawn. There is a danger to positing lessons in a vacuum. As Generaloberst Lothar Rendulic observed, "very often these [battle] experiences will also depend on circumstances occurring never again. Such experiences can only have a conditional, but never a general, correctness."[14] The interrelated conditions from which a lesson is drawn, must be included to express its complete utility.

"Context" serves as a means to separate long-term trends in the conduct of war from transitory conditions that exist only within a limited spectrum of time and space on a particular battlefield. The measure of contextual success is the recognition and application of the unique conditions that define each lesson to tactical operations and implementation of future doctrinal changes.

"Essence" is the third criterion used to evaluate the learning system. An effective lesson must be reduced to its central properties. The lesson system is quickly overwhelmed, if information overload is not avoided. The processing of lessons from the battlefield must include only the critical essential themes of observations. In his effort to translate the lessons of the 1973 Arab-Israeli War to the U.S Army, General William E. Depuy realized the danger of the "wheat being lost with the chaff" and sought to extract "specific operational problems and submit each problem to an agency...that could recommend improvements to overcome the problem on a future battlefield."[15]

The fourth criterion deemed essential to an effective lesson system is its "integrative" quality. Little can be gained through the observation of events of the battlefield, unless a process exists to return the product of the lesson back to the army in the field. In addition to providing

feedback on lessons, the integrative quality suggests the need to survey the level of acceptance of lessons by the field army. This remains a difficult task, as it is often the most obvious and least meaningful lessons that are the quickest to be adopted. As a British officer observed at the turn of the century:

> So that whilst [sic] the study of a recent war may have an immediate effect on the views and opinions of the individual student [of the Art of War], it is only the most conspicuous [sic] and least controverted lessons of a recent war that will influence an army generally in the immediate future; and so it follows that the so-called 'Lessons of a War' seem as a rule to be seed sown on a barren soil.[16]

"Utility" is the final criterion used to assess the effectiveness of a lessons model. Utility is actually a measure of "customer satisfaction." It is tempting to label this criterion as "correctness", but that implies ensuring that the "right" lessons are drawn. Utility is a function of providing the field with the information the army-at-large determines it needs. Soldiers, by nature, are action oriented and demand practical solutions to practical problems. The same admonition that Professor C. Vann Woodward offered military historians applies to the advocates of the lessons model, it is "the quick and not the dead they are addressing. The dead, of course, could not care less, and the quick tend to lose interest if they are not themselves addressed."[17]

Based on the defined criteria, this study now turns to compare four historical cases of armies as they attempted to extract observations from the environment of battle, to translate them into a meaningful format, in order to improve combat performance. While it must be remembered that each army possesses its own personality and characteristics, each case may offer insights to the present U.S. Army system.

III. LEARNING DURING WARTIME: 1939 GERMAN ARMY

In a span of 24 days, beginning on 1 September 1939, the million man Polish army was crushed by the German Army. If not already apparent to the German Army in the aftermath of the Polish campaign, the necessity of extracting lessons for the purpose of improving tactical performance became clear on 9 October 1939 with the issue of "Directive Number 6 for the Conduct of the War."[18] Directive 6 outlined Hitler's intention to conduct offensive operations in the West against England and France without further delay. Thus, it fell to the Army High Command, or OKH (Oberkommando des Heeres), to assess the conduct of operations in Poland and prepare the army for the invasion of France (Figure 2).

In hindsight, the effort to extract the lessons of the Polish campaign by the German Army is held up as a shining model of effective self-assessment and criticism.[19] Statements of this nature infer that the collection of meaningful lessons is somehow inhibited by a greater level of success on the battlefield. This idea will be discussed in a later segment of this study; suffice to say, at that time, observers outside the German army viewed the results of the campaign as an unqualified victory. The special bulletin of the U.S. Army, War Department, dated 6 October 1939, read:

> [The German campaign] constitutes one of the most rapid and overwhelming victories of military history. This Cannae of Cannaes was the result of marked military superiority of the German Army...this German superiority was expressed in the relative number of troops placed in the field by the two antagonists, in the quanitity and quality of military materiel on each side, in the far higher training standards of the German Army, though perhaps most dramatically of all by the comparative leadership displayed by the two high commands.[20]

In contrast, the German Army held a markedly different view of the results of the Polish campaign and all the implications it held for future operations in the west. The invasion of Poland had been conducted at the end of a rapid period of expansion by the German military. Senior army leaders realized that in spite of the early success, at the end of the Polish campaign, the German army was largely a paper tiger. Equipment modernization programs, training of reserve units, combined arms doctrinal issues, and organizational structure changes, begun before the campaign, had yet to be resolved by the time the Polish Army capitulated.[21]

The pressure to conduct offensive operations in the west spurred the reluctant OKH to begin to synthesize the lessons obtained from Poland. The notes of Chief of the General Staff, Colonel-General Franz Halder, included (sic), "[the] techniques of Polish campaign [are] no recipe for the West. No good against a well-knit Army."[22] This view reflected the assessment of most senior commanders - that the Army was being rushed prematurely toward an attack against France. OKH believed the success against Poland was, in large part, due to the untenable strategic situation of that nation.[23]

At the level of German tactical formations, the Polish campaign reaffirmed the basic precepts of doctrine, but pointed to failures in individual and leadership training, as well as to problems in the integration of armored formations with infantry and fire support elements. Typical of the observations from the campaign were comments by Major General F.W. von Mellenthin: "...the operations were of considerable value in 'blooding' our troops and teaching them the difference between real war with live ammunition and peacetime maneuvers."[24]

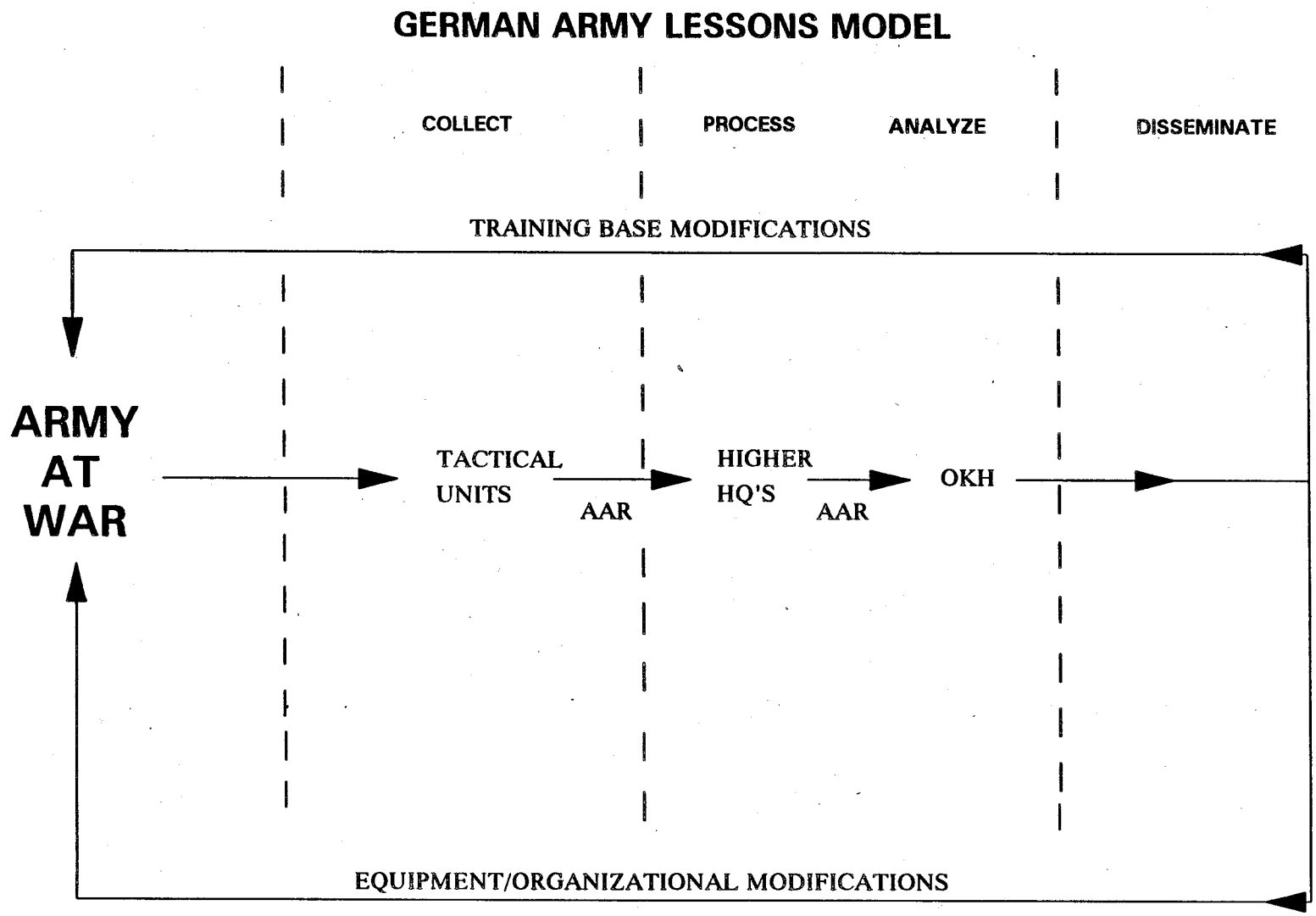

Figure 2: German Army Lessons System - 1939

Initially believing that offensive operations against England and France would begin as early as the winter months of 1939/1940, the German Army had very little latitude in collecting, assessing and implementing the lessons of Poland. The vehicles used by the German Army to compile the lessons of the Polish campaign were the after action reports written by individual units, and combat effectiveness evaluations which were developed by each divisional and corps commander. The executive agents in charge of translating the lessons into programs aimed at preparing the Army for operations in the West were the respective staff sections of the General Staff.

Problems identified in unit training were overcome through a centrally managed program of collective and individual training. As early as October, 1939, OKH had issued an army-wide memorandum on training shortcomings identified in Poland.[25] Included in the memorandum were details on corrective steps subordinate commands would take, and a system to report progress to Army headquarters. For example, the organization of the Light Divisions was universally criticized for its lack of armor. As a result, these six divisions were upgraded to full Panzer divisions before offensive operations began in the west.

Similar measures which should have been undertaken to correct other identified shortcomings were not acted upon, causing them to remain uncorrected at the start of the invasion of France. For example the problem of an asymetrical force structure (the majority of German Infantry Divisions were foot mobile) was identified during the Polish campaign, but continued to be a problem that confronted the German Army throughout the remainder of the war.

In terms of the essential criteria of this study, the 1939-1940 German model therefore produces mixed results. The assimilation of the lessons from the Polish campaign does meet the criterion of timeliness. The collection, synthesis, and dissemination of the campaign lessons occurred within a period of six months. The evaluation of unit assimilation was superceded by the continuing demands of the war. The reality of the impending offensive against France served as the catalyst that accelerated the pace between collection to dissemination. When confronted with Hitler's decision to conduct an early attack in the west, the OKH was left with no options other than taking steps to correct the deficiencies identified in Poland as rapidly as possible. The centralized control of the German lesson model at the OKH level facilitated the speed of this process.

While centralized control by OKH assisted the rapid processing of the lessons obtained from Poland, it also detracted from the complete analysis of the unique conditions of that campaign. The need to rapidly provide practical solutions prevented the complete evaluation of the circumstances and environment in which the lessons were gathered. Ultimately this failure did not effect German operations in France during 1940, but would surface in operations against the Soviets later in the war. As Major General Lothar Rendulic observed:

> There is no absolute war experience; war experience is true only with regard to a certain enemy...If the adversary is a different people, experiences deduced from other wars must be adapted, above all, to the psychological qualities of the people and to the characteristics of the terrain...The German Supreme Command applied the experiences, acquired on the Western front in 1940, unchanged to the war against Russia.[26]

The OKH succeeded in defining the essential lessons of the campaign. The tactical lessons were grouped around four broad categories: issues

involving weapons and equipment, organization of troops up to major unit levels, tactical troop leadership, and issues involving TTP (tactics, techniques and procedures). Furthermore, with the implementation of the training program in the aftermath of the Polish campaign, the OKH focused specific tactical lessons on training requirements, in preparation for operations in the west.[27] Ultimately, in terms of distilling the central lessons of the Polish campaign, the OKH used these experiences to refine the execution of its Blitzkrieg doctine.

Integration of the lessons learned from Poland was accomplished by means of commander's reports, which assessed the level of unit training. While an integrative system was included in the overall German lessons model, operational demands and other constraints precluded the desired results from being achieved. The identified lack of motorization simply could not be corrected due to wartime limitations of the German economy.[28] As the war expanded, the demands of operations would limit the integration of tactical lessons largely to modifications in the training base and, to a smaller degree, modifications of equipment.

In the German model, the criterion of utility was achieved through the construct of the lessons system. The field army provided the input into the system, and in so doing, controlled the focus of products returning to the field, in terms of training and equipment. While this feedback proved effective when applying lessons from Poland to France, it became difficult to centrally control as the theater of war expanded. At the start of the war, a commonality existed within OKH and field commanders regarding the tasks required to shape the German Army into an effective force. This shared vision was lost in the aftermath of the fall of France.

Two factors emerge as central to the success of the German Army lessons system: level of focus and degree of self-criticism. These two elements proved to be successful in Poland, but failed in the longer term. The German Army was able to rapidly focus on the critical lessons from the Polish campaign because the problems identified had resulted from the rapid expansion of the army prior to the war. These problems were, in large part, internal to the organization of the German Army. As such, most members of the army anticipated shortcomings as a reflection of inadequate training levels and shortages of equipment. The tactical lessons from Poland did not significantly alter the previously held opinions of the German officer corps, who were well aware of the condition of the German Army.

One of the strengths of the German model is the degree of self-criticism. The design of the model requires complete candor, as no second tier of assessment existed. The collection means of unit reports demanded honest appraisal of unit performance. As previously mentioned, what may be truly unique to this case is the ability to achieve effective self-criticism, in view of the victory won on the battlefield. The evaluation of the army's performance in Poland became more and more critical as one climbed the level of command.[29] The ability to be self-critical and to look upon an organization's performance with an unblinking eye seems worthy of consideration for inclusion on the list of lessons learned criteria.

IV. LEARNING DURING WARTIME: U.S. ARMY IN ITALY

Operation Husky, the Allied invasion of Sicily, initiated operations by the U.S. Army in the Italian campaign. Beginning 10 July 1943, a

combined force of British and American units completed the conquest of Sicily in 34 days. While heralded as a major victory by public sources, the campaign was characterized in the War Department after-action report as a "strategic and tactical failure" and a "chaotic and deplorable example of everything that planning should not be."[30] Within a month of the completion of ground operations on Sicily, Allied forces began operations on the Italian mainland that continued through the remainder of the war.

The path that led the American Army to the invasion of Sicily and then to the Italian mainland was not a smooth one. Following the completion of operations in North Africa, many of the specifics of the Allied coalition strategy had yet to be developed. Made at the Casablanca Conference in January 1943, the decision to invade Sicily left many U.S. policymakers perplexed. General George C. Marshall questioned, "...was an operation against Sicily merely a means to an end, or an end in itself? Is it to be part of an integrated plan to win the war or simply taking advantage of an opportunity?"[31] From this inauspicious beginning, the U.S. Army began an operation in Italy that would serve as a school house for the larger cross-channel invasion conducted less than a year later.

The U.S. Army began operations in Sicily and Italy with a well developed system of processing battlefield observations into products for the use of the field army (Figure 3). The system had been used to assess combat operations in North Africa and had proven useful in shaping the design of a rapidly expanding U.S. Army. The centerpiece of the Lessons Learned system was the Combat Analysis Section, Operations Division, of the War Department.

The Combat Analysis Section was a unique organization. It operated under the auspices of the newly reorganized Operations Division (OPD), which was responsible for the strategic planning and operations of the War Department, but served as the synchronization center for literally every form of battlefield observation.[32] Acting as the clearinghouse for Army lessons, the Combat Analysis Section provided feedback at all levels. Products varied from a Special Operational Summary for the White House staff, to comic books entitled "Hints on the Heine" for GI's in foxholes.[33] The most meaningful document produced by OPD was the Operations Division Information Bulletin (OPDIB). While providing a source of insights, the OPDIB did not mandate doctrinal change. Rather, as stated in the initial edition, the bulletin's intent was:

> ...to insure the rapid interchange of ideas between the various theaters and the prompt dissemination of data of practical value to theater commanders and higher staffs as received from various sources by Operations Division, WDGS.[34]

Within the Italian theater of operations, the lesson learning system relied on unit reports to disseminate battlefield observations. Although not formalized into doctrine, each unit operations report contained a section outlining lessons learned.[35] The 3d Infantry Division Operations Report was typical of the scope of lessons extracted from Operation Husky.[36] The report contained a summary of operations interwoven with relevant observations on the planning, preparation, and conduct of the battle. Opening the report, Major General Lucian K. Truscott, Commanding General, 3d Infantry Division, commented:

> ...[the Sicilian] Operation developed no new lessons; on the contrary, it emphasized well-known principles. There were some differences in technique and in solution of problems that may be worthy of comment, and are commented on in the report.[37]

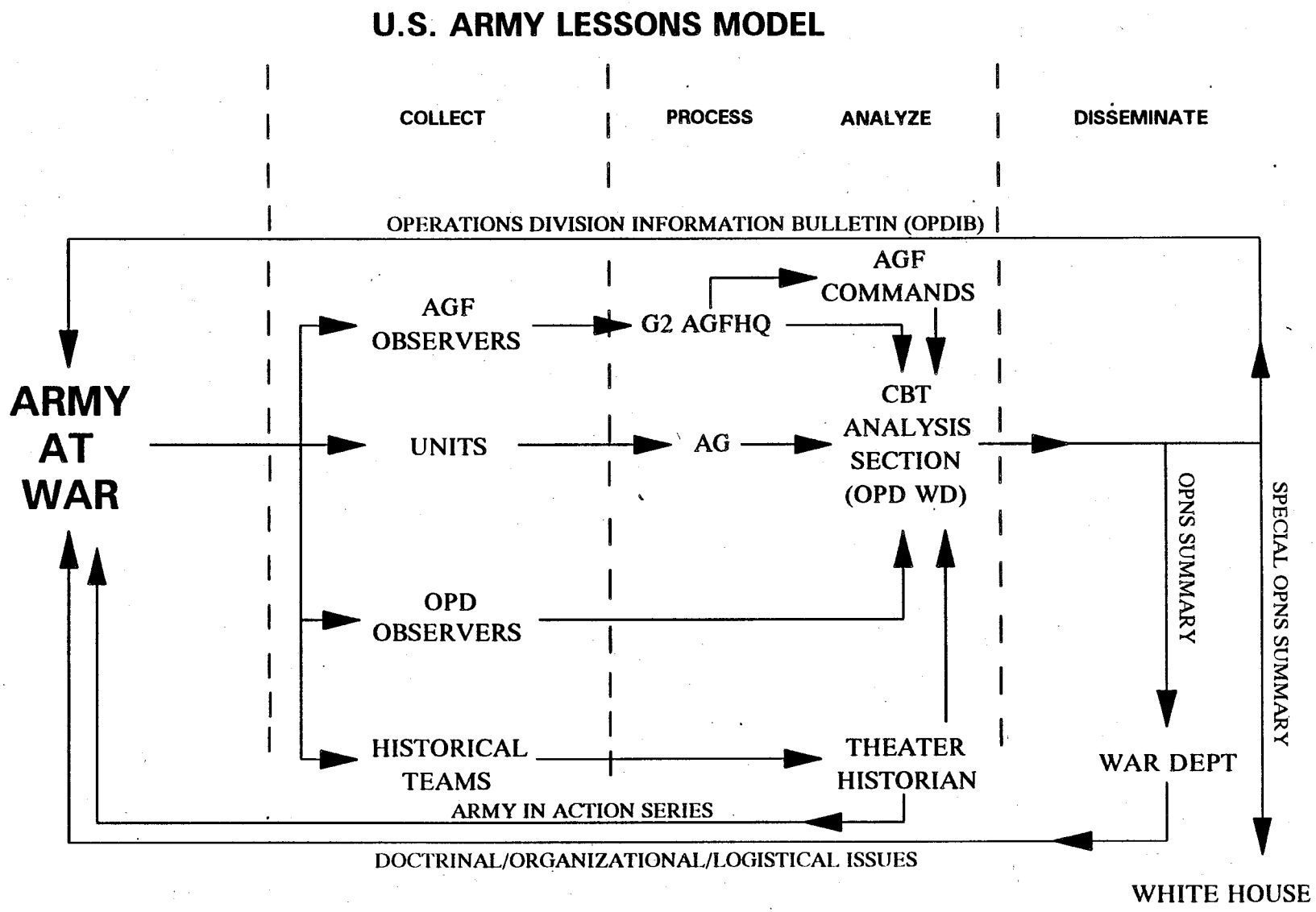

Figure 3: U.S. Army Lessons System - 1943

In spite of formal and informal mechanisms for the collection and dissemination of lessons, the lesson learning process ultimately broke down within the Mediterranean Theater. Shortcomings in the integration of indirect fires, utilization of close air support, and the nature of the German force had to be learned by each unit individually, and in some cases, relearned by the same unit on a different occasion.[38] The 1943 American Army lessons learned model played a key role in preparing for the invasion of France, but largely failed to help the troops in the Italian theater as they transitioned from Sicily to Salerno and beyond.

Overall, if one approaches the criterion of timeliness, the American Army lessons learned model achieved success. It rapidly provided battlefield observations to a centralized point for analysis. Tactical units in the Italian theater provided operational reports which summarized combat actions and lessons within a matter of weeks. Many of the identified problems served to preclude similar failures later during the conduct of the European campaign.[39] The inability to successfully disseminate lessons within the Mediterranean Theater of Operations (MTO) was not a failure in terms of time, but a systemic problem with the integration of lessons.

The organization of the lessons learned model of 1943 and the nature of the European theater precluded problems that might arise by adapting lessons out of context. Feedback to Headquarters, Army Ground Forces (HQAGF) and to the OPD, War Department, was grouped by theater with returning products managed along similar lines.[40] As previously mentioned, unit operational reports assisted in positing the lessons of the campaign in a meaningful contextual format by linking the lesson to the action in which it occurred.[41]

The lessons derived from the Italian campaign, as articulated by the major tactical units, did achieve the criterion of essence. Corps and division operational reports spoke only to the most critical problems they encountered on the battlefield. Special staff elements went into the requisite level of detail, describing problems at all echelons, down to the specifics of crew drills and problems with individual pieces of equipment.[42] As summarized in a later research report, 2d Armored Division made six recommendations as a result of the Sicilian campaign. Included in their observations were: the importance of a thorough study of terrain and its effects on employing armored forces, revision of air-ground operational procedures, lack of training in civil-military affairs, problems associated with loading ships and the maintenance of unit integrity, inadequate training of prisoner of war interrogation teams, and the need to push supplies forward to support limitations of divisional transportation assets.[43] These observations conveyed the major problems encountered in amphibious operations in the European Theater of Operations (ETO).

Integration of the lessons obtained from the Italian campaign was accomplished to a lesser degree. Many of the problems associated with the campaign in Italy were avoided in the execution of Operation Overlord and the battles across France. One can attribute two reasons for this occurance: First, the focus of the U.S. Army (including the lessons system) throughout the Italian campaign was on the preparation for the cross-channel invasion of Europe; secondly, many of the leaders, soldiers, and organizations that participated in the earlier campaigns in Italy were involved in operations in France. As a result, personal experience and unit institutional memory were responsible for future successes. The

integration of lessons developed an interesting paradox, observations from the MTO were successfully transfered to other theaters, but remained stagnant within the U.S. Army as it fought in Italy. Without an aggressive, centrally managed lesson system in theater, each unit was often left to its own devices.

In the 1943 U.S. model utility was achieved largely because of the focus of the senior leadership of the army and the clear establishment of priorities. Since the earliest stages of the war, the focus of War Department efforts was on an invasion of Europe from staging bases in England.[44] The analysis of battlefield observations and the dissemination of products back to the field army continued to orient on this objective. The common enemy shared between the MTO and the ETO, assisted in the transition of observations through the lessons system.

This sharp sense of focus on the cross-channel invasion was the greatest strength of the U.S. Army lessons model, but the multiplicity of its means of collection was also essential to the complete interpretation of battlefield events. Training or doctrinal changes made by the subordinate commands of HQ, AGF, were documented from observations by dedicated lesson collection teams and tactical units. However, while source material was readily available, the interpretation of the information and the application of it to doctrinal training was not able to keep pace with the war.[45] Because of the failure of the army at large to anticipate needed changes in doctrine, commanders in the field were often forced to implement ad hoc solutions.[46]

V. LEARNING AFTER WAR: BRITISH BOER WAR EXPERIENCE

The Second Boer War broke out 11 October 1899 and dragged on for two and half years. The effect of the war on the British Army was profound. At the outset, the army, government, and the British people entered the conflict supremely confident in a military establishment that had dominated battlefields throughout the world. As historian Jay Stone observed, "if it came to war the army had no doubt that it could break undisciplined Boer farmers with its sturdy infantry, its shrapnel, and the shock of its regular cavalry."[47]

The conduct of the war can be divided into two phases. The first phase began with the Boer invasion of British Rhodesia, Natal, and the Cape Colony in October 1899, ending with the destruction of the conventional Boer Army in October 1900. The second phase was largely a guerrilla war, where Boer commandos utilized "hit and run" tactics against a British Army of occupation led by Lord Kitchener. At war's end in May 1902, the British Army had suffered 22,000 killed, and the nation's confidence in the army had been shattered.[48]

The British Army entered the Boer War as a rather poor representative of the premier world power of the period. The level of organization and training within the army had seen little change over the intervening years between the continental triumphs of Wellington and the approach of the new century. Unlike the other European powers who had modernized their armies, the Boer War found the British Army prepared to fight in the "colonial war" style it had operated under throughout the nineteenth century.[49]

The British Army lessons model at the time of the Boer War was based on a system that had existed since the creation of armies — one which

was based on wartime experience (Figure 4). As each tactical unit and leader encountered the dynamics of the South African battlefields, individual interpretation of the experience served to shape the lessons drawn. The lack of an efficient staff system precluded the formalized collection and analysis of lessons during the length of the war.[50]

Frustration with the conduct of the war would lead to two alternative means for the drawing of lessons from the Boer War. The official vehicle was a Royal Commission issued with a warrant "to inquire into the Military preparations for the War in South Africa, and into the supply of men, ammunition, equipment, and transport by sea and land in connection with the campaign, and into the Military operations up to the occupation of Pretoria."[51] Created on 19 September 1902, the Royal Commission produced a five volume report on the issues in its charter that became available to the British public by 1903.

The second means of compiling lessons was informal, or outside the structure of the British Army and government. In large part, the members of this contributing group were disaffected British officers who published stinging commentaries on their perceived failures within the British Army. Characterized by Major-General R.S.S. Baden-Powell as "amateur military critics," this group included observers from other armies and civilian pundits, such as Jean de Bloch.[52] While it is somewhat difficult to measure the relative effect that these unofficial sources of lessons had at the time, they appear to represent a pervasive view of failures within the army. Certainly in the opening days of World War One the British Army would be confronted with problems it had experienced in the past, due to the failure to incorporate the Boer War lessons, as articulated by these informal critics.[53]

At the tactical level, the central lessons extracted from the Boer War were the effects of new technological innovations on the antiquated tactics, techniques, and procedures (TTP) of the British Army. While, this observation was shared by the official lessons purveyors as well as the amateur critics, the two factions parted company as to the utility of the application of these lessons to future war.[54] Critics, such as Bloch, would posit the paramountcy of the defensive form of war, and the resulting futility of warmaking in general. On the other hand, the British military establishment (or as categorized by Bloch, the routinists) would advocate internal reform of the organization and re-training of the army.[55]

Analysis of the performance by the British Army was completed within two years of the final surrender of the Boer forces. The reforms needed to correct identified lessons continued throughout the intervening years until the outbreak of World War One.[56] Based on the vast scope of the problems that required attention, the amount of time required to introduce changes seems reasonable. The criterion of timeliness therefore receives a qualified level of acceptance.

The measure of context achieved the greatest degree of success within the British model. The Report of the Royal Commission included a complete discussion of the strategic and operational goals and situations. In addition, the findings of the Royal Commission included a discussion of the lessons obtained from the Boer War and their relationship to potential future continental threats.[57] The amateur critics added to the discussion of the war's context. Chief among them was Bloch, who in a lecture to the Royal United Service Institution in 1901, specifically addressed challenges to the lessons of the Boer War and their usefulness to future war on the European continent.[58]

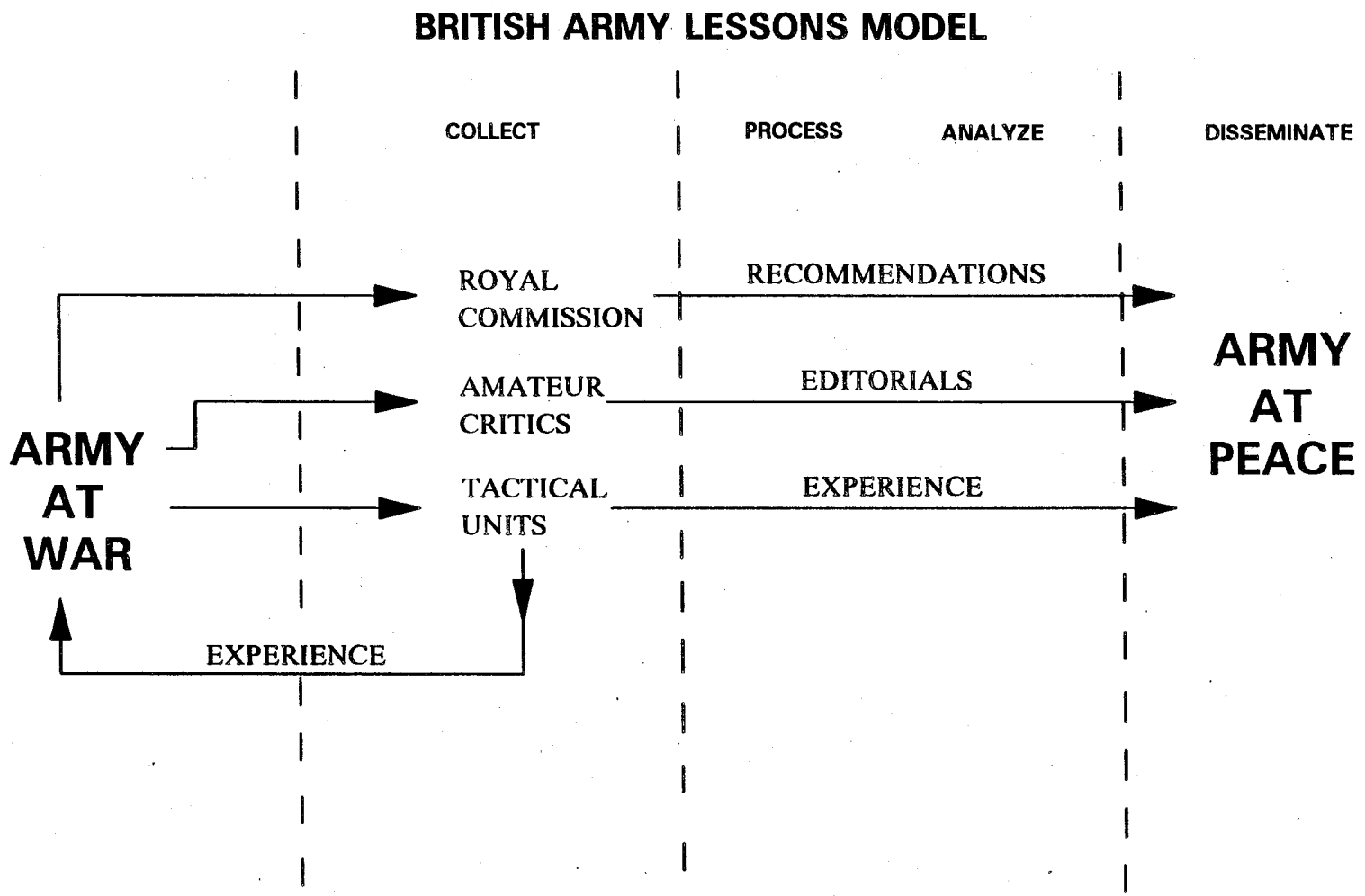

Figure 4: British Army Lessons System - Circa Boer War

In the British model, the criteria of essence and integration played off one another. The magnitude and number of the lessons that confronted the British Army after the Boer War influenced their ability to integrate change. The changes that were mandated challenged many of the tradition-bound views held by the institution of the army. For example, selection and training of officers was one such contentious issue, where the integration of change met serious opposition. General Lord Kitchener commented:

> Officers should be trained to take responsibility. They should be induced to exercise their brains and to strike out ideas for themselves, even at the risk of making mistakes, rather than stagnate, or to follow the dull routine which at present affects the officers in our service and moulds them into machines of very limited capacity.[59]

The British model provided a return to the field army beginning at the lowest tactical levels. The Combined Training manual of 1902 was an early attempt to translate the lessons of the Boer War into doctrine.[60] Training standards were improved for regulars and reserve formations. In particular, the impression left on the British Army by superior Boer marksmanship received paramount attention in the revision of British training and would pay dividends in 1914. The application of the lessons of the Boer experience made the British Army an improved organization.

The British model worked because the complacency of the army and government had been shaken by the impact of the Boer War. The organization of the system, aside from the Royal Commission, was ad hoc, but it was successful in bringing needed change to the army. Following the immediate reforms brought by the Boer War, the British military establishment continued to examine its own capabilities throughout the first decade of the Twentieth century. In part this was due to concerns over the

capabilities of continental rivals, but was also a result of the new sense of self-criticism born of disaster in the Boer War.

VI. LEARNING AFTER WAR: U.S. ARMY IN THE GULF WAR

Beginning 6 August 1990, the U.S. military and its allies deployed an overwhelming combined and joint force to the Persian Gulf region, in response to the Iraqi annexation of Kuwait. From 16 January to 28 February 1991, the U.S. succeeded in forcing the withdrawal of Iraqi forces from Kuwait. It may be said that in the aftermath of the war, the U.S. Army entered a new phase of Operation Desert Storm—the lessons conflict. This competition to define the lessons of the Gulf War is taking place within the institutions of the Army and in the public forum. Perhaps more than any previous conflict, the Gulf War is defined in the mind's eye through each individuals' interpretation of lessons.

Harry G. Summers, in his analysis of the Gulf War through the eyes of a Vietnam War veteran, is typical in his comments:

> If you would understand America's victory in the Persian Gulf war you must first understand America's defeat in Vietnam. Combat experience in the jungles of Vietnam was the common thread that bound all the senior U.S. commanders in the Persian Gulf war from the chairman Joint Chiefs of Staff...[to the] colonels commanding the regiments and brigades.[61]

In terms of the evaluation of lessons, the outbreak of Gulf War found the U.S. Army in a unique position for three reasons. First, the changing strategic situation challenged the Army's understanding of the basic relationships of lessons. Previously, the thrust of all lesson learning had been in context with the Soviet Union. Lessons were disseminated because they were judged to be useful in support of the prevailing view of future war—that view had now changed. It is not apparent whether

"smaller" issues such as fratricide would have surfaced as a major concern had the Soviet Union remained a viable threat.[62]

Secondly, the Army now had in place an established agency whose specific charter was to capture the lessons of the conflict. In the past, the U.S. Army had relied on ad hoc organizations or arrangements created after the initiation of hostilities. Operation Desert Storm was the first test of the Center for Army Lessons Learned (CALL) in a mid-intensity conflict. Since its inception, CALL had been associated with the publication of the lessons of the National Training Center (NTC) and little more. The Gulf War would change that to a degree.[63]

Finally, an acceptance had developed within the military, and perhaps within the nation itself, on the utility of lessons. At all levels, decisions on the the conduct of this war were couched in the terms of lessons learned from previous experiences.[64] This common usage of past lessons spanned from President Bush, who designed policy based on the lessons of Munich, to battalion Tactical Operations Centers (TOC) which received copies of the German lessons of desert warfare.[65] At the end of the Gulf War, the assessments of U.S. military performance were almost universally expressed in terms of the perceived lessons that were learned through this conflict. As the House Armed Services Committee report noted:

> It is vital that we fully understand the lessons of the war in Southwest Asia and what they mean to our future...[however] one of the most important lessons to be learned is that this war was unique in many ways.[66]

The model used to determine the lessons of the Gulf War was a hybrid of the Wartime Army Lessons Learned Program, as defined by Army Regulation (AR) 11-33 (Figure 5). The fact that the lessons model created for the Gulf War was different than originally designed in doctrine is not an

indication of perceived shortcomings in the Army's wartime model. Rather, it is a symptom of how the Army conducted business during the Gulf War. The tendency to combine existing organizational structure with augmentation, either by creating an additional tier within an organization or by replacing existing staff with personnel of higher grade, was felt across the spectrum.[67]

In addition, the use of a special group in lieu of CALL reflected the desire of the Army's leadership to limit the impact of the war on future Army peacetime operations.[68] By late spring 1991, the Combat Training Centers (CTC) were resuming operations, which placed requirements on CALL to continue its focused rotation program. The structure of the Wartime Lessons Learned Program (WALLP) incorporated elements of the existing lessons organization but, as in the past, represented an ad hoc mechanism to secure wartime lessons.[69]

The collection and processing phases of the Gulf War model were accomplished through a scheme that followed the existing Army system. The key elements of these phases were the use of Combined Arms Assessment Teams (CAAT), which were formed by the CALL using subject matter experts (SME).[70] These teams were used to gather observations from units within the theater and supporting units located elsewhere. CALL produced three newsletters during the deployment phase of Operation Desert Shield; each brought direct feedback from units in-theater.[71] Tactical units provided the other source of lessons through command reports, unit histories, and after action reports.

CALL was not left to assess the lessons of the war unassisted. Based on a message from the Vice Chief of Staff of the Army, dated 18 March 1991, a special study group was created to synthesize the Army's lessons.[72]

Major General Thomas H. Tait was given the mission to form the study group and to identify Army lessons learned from Operations Desert Shield and Storm. Officially designated the Desert Storm Special Study Group, the Tait group spent seven months formulating its report. Adopting the battlefield framework defined in TRADOC pamplet 11-9, Blueprint of the Battlefield, the Tait group produced a seven volume report on Army lessons ascertained from the Gulf War.

The findings of the Tait study were approved by the Chief of Staff of the Army on 16 October 1991, but the distribution of the report ran into difficulties almost immediately. As the report was in the process of being mailed to the field army, it was recalled for reasons that still remain open to speculation. Concerns over the public airing of problems pertaining to the Army's performance, or political infighting within the Army, are two possible explanations for the "close-hold" label attached to the document.[73] The ultimate fate of the document remains unresolved, but the vast amount of raw material collected in its production, including over 13,000 observations, has been used by other Army agencies.[74]

Two other special studies were commissioned to examine the Army in the Gulf. One was created by the Chief of Military History in June of 1991, to complete a narrative history of the U.S. Army in the war. The 3d Army Historian during the conflict, Colonel Richard M. Swain, was given this charter. While his efforts were completed in late June 1992, the study has yet to be published--a prisoner of the bureaucracy of Army historiography.[75] The second special study was conducted by Brigadier General Robert H. Scales. General Scales, a Duke educated historian, focused his study on recounting the Army's story in the Gulf War. The

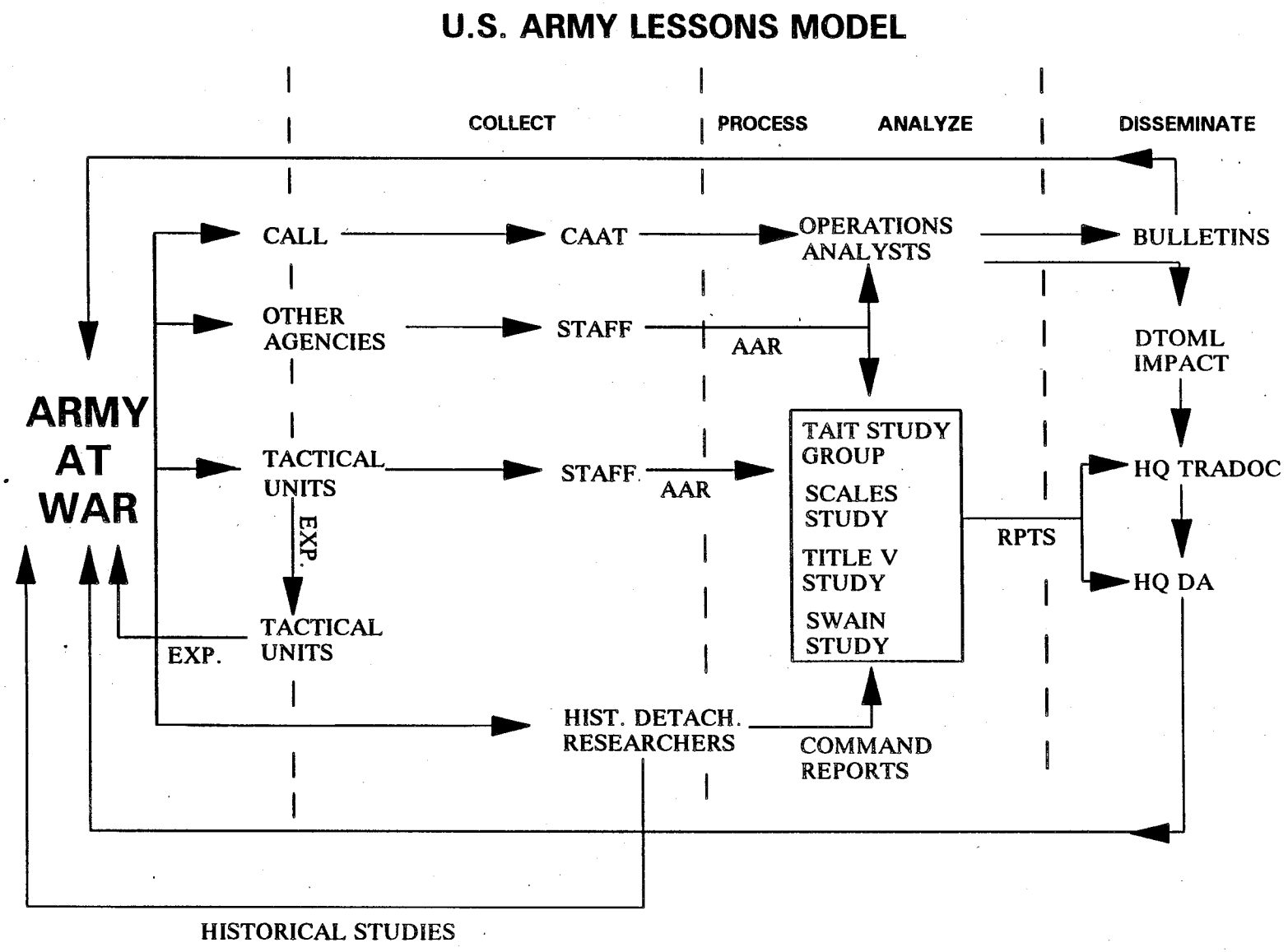

Figure 5: U.S. Army Lessons Learned System - Gulf War

product of Scales effort was the publication of a broad overview of the Army in the war, which has been characterized as a "good news story."[76]

The last significant element in the assessment of the Army's Gulf War lessons is the impact of a series of General Officer meetings. Throughout the process of determining the lessons of the war, several meetings of senior leaders shaped the collection and validation of the accepted list of lessons. The first of these occurred at King Kalid Military City (KKMC) in mid-March 1991. This meeting, chaired by the 3d Army Commander, Lieutenant General John Yeosock, assembled all senior Army leaders in-theater to collect the lessons derived from the war.[77]

As the analysis of observations continued under the auspices of the Tait study, several General Officer Steering Committee meetings were cited for furthering the process.[78] The three committee meetings mentioned were associated with the issues of fratricide, logistic support, and Airland Battle (ALB) future concepts. In mid-July 1991, another General Officer committee, chaired by the Vice Chief of Staff of the Army (VCSA), approved the tenative list of lessons synthesized by the Tait study.[79] The senior leadership of the Army was decidedly involved in the final product of the lessons system, and the results bear the indelible mark of their own interpretation of the war's outcome.

At the present time, the assessment of the lessons system of the Gulf War using the established criteria will be incomplete. However, a tenative judgement can be made based on an assessment of the Army's actions in the two and half years since the war's end. A review of doctrinal material published since the conclusion of the war illustrates the incorporation of lessons gathered during the conflict. Upon analysis of this data, the Army appears to have returned the products of the lessons system to the

army-at-large within the defined parameters of timeliness, integration, and utility. In the epilogue of his study of the U.S. Army in the Gulf War, General Scales states:

> ...In the months following the Gulf War, the Army leadership carefully studied all aspects of the war and subsequent operations. The lessons derived from these studies were then incorporated into the latest revisions of doctrinal literature.[80]

Problematic to this assessment is the relationship between the two remaining criteria, essence and context. Failure to achieve these two criteria would lead to the breakdown of the other three criteria - timeliness, integration, and utility. Field Manual (FM) 100-5, Operations, dated June 1993, is specifically named by Scales as incorporating the lessons of the war. Operations Desert Shield or Storm are cited directly at ten different points in the manual: 1) rules of engagement, 2) illustration of the principle of versatility, 3) an example of force enhancement through the use of space based systems, 4) demonstration of a case of force projection capability, 5) an example of the impact of media on military operations, 6) an example of a combined operation, 7) illustration of the use of sequels in planning, 8) demonstration of the use of a rehearsal, 9) an example of an offensive operation, and 10) a one page summary of the operation.[81] In addition to these overt citations, FM 100-5 addresses other issues that came to light as a result of lessons from the war.[82] However, the validity of these observations and their source remain questionable.

While the lessons system used by the Army to examine the Gulf War relied on the existing structure to collect observations, synthesis of the lessons was conducted through senior leader seminars. While similar to the 1939 German model in some respects, it appears that the level of

self-criticism achieved in the German model has not been duplicated by the U.S. Army in its examination of the Gulf War. The problem of assessing observations of unit performance began during the collection effort conducted by CALL. The Combined Arms Command historian summarized interviews with Lieutenant General Leonard P. Wishart III, CAC Commander, and Brigadier General James M. Lyle, CAC Deputy Commanding General for Training, in the following statement:

> ...[they] made clear in their subsequent interviews, several divisions and some higher headquarters refused to cooperate with CALL in its observation-gathering work...General Lyle commented, too many high officers simply did not accept the philosophy, typical of the combat training centers, that units and individuals could discuss problems in an open manner and profit from their mistakes and those of others.[83]

The perception by many that the Army has been less than forthcoming in its self-examination, has been furthered by the treatment of the results of the Tait study. In late February 1992, copies of the report were released, and then immediately recalled pending further dissemination instructions.[84] To date, the status of the report is not clear, but the suppression of this study has damaged the credibility of the Army lessons system.[85]

Heretofore, the Gulf War lessons system has failed in terms of context. Responsibility for this failure can be laid at the feet of the community of historians within the army. In a period that found the Army attempting to define the validity of its observations on the Gulf War, the Army's historians abdicated their responsibility to examine the conduct of the war.[86] The role of the history of the war has largely been limited to vignettes used to illustrate particular lessons.[87] While historians discuss the merits of using the past to chart the present, they may have done the Army a disservice. They would be well served to remember the

comments of Professor Michael Howard:

> ...Our awareness of the world and our capacity to deal intelligently with its problems are shaped not only by the history we know but by what we do not know. Ignorance, especially the ignorance of educated men, can be a more powerful force than knowledge.[88]

So far the attempt to extract valuable lessons from the Gulf War appears to be headed to failure. Because of problems in terms of a lack of self-criticism, the criterion of essence has not yet been achieved. The central properties of the observations of the Gulf War may have been defined and returned to doctrinal literature, but the Army has not yet managed to create a consensus of lessons. In addition, the contextual filter that guides the Army in the future use of battlefield lessons has not been sufficiently developed. While the performance of the U.S. Army in the Gulf War has been put forth as testimony to the value of learning from past mistakes, it remains to be seen if this characterization will hold in the future.[89]

VII. CONCLUSIONS

The four cases studies which were examined provided validation of the initial criteria essential to an effective lesson learning model. The survey of the material revealed several additional implications critical to the relative success of a lessons system. Upon examining these implications by means of comparison, the basic question of the current U.S. Army system will be addressed.

The first condition extracted is the effect of the perception of success or failure within a military operation. The British experience during the Boer War illustrates the effect that the perception of failure has on the lessons process. In the British case, an underdeveloped system

of processing observations was energized by battlefield failure and public demand for military reform. The experience of the U.S. Army in the Gulf War suggests the opposite case, where the public perception of battlefield success has impeded the lessons process.

Perhaps the most revealing case study in this respect was the 1939 German model, in which public perception of success had no effect on the processing of battlefield lessons. It is interesting to note the comments made by the chroniclers of the German model. Upon examining the German reaction to the victory over Poland, one is struck by the authors' sense of amazement that given success, the OKH would actively look for problems.[90] While this may be a function of the difference in military cultures, it is certainly more difficult to be totally objective and critical in the assessment of an unqualified military success.

Along similar lines, the German model is an example of the ability to analyze one's own condition successfully. Self-criticism as a tool in the extraction of lessons is of paramount importance. The inability of the U.S. Army to incorporate this attribute into its lessons system has undermined the conclusions drawn from the Gulf War. In the German case, the OKH developed the potential of self-criticism by making it a matter of command interest.[91] It is interesting to note that the AAR's submitted by American tactical level commanders during the Italian campaign were quick to point out any perceived tactical shortcomings, but unlike the German model the level of frankness declined as one climbed the levels of command. If the U.S. Army is determined to develop the self-critical attribute, it needs to further examine the procedures of the wartime lessons program.

A sense of focus proved instrumental in the lessons process of the 1939 German model and in the 1943 U.S. Army model. In both cases, well defined priorities were established, in terms of the purpose of battlefield observations. Each of these lessons systems clearly understood the nature of future operations. In the German case, the early decision to attack in the west after the victory in Poland created conditions that the lessons system was forced to overcome. The 1943 U.S. Army model took into account, as it analyzed the lessons of the Italian campaign, that its goal was the preparation for the cross-channel invasion of the continent of Europe.

The U.S. Army model faced a different circumstance following the Gulf War. The long standing emphasis on preparation for battles in Central Europe had disappeared. Analysis of the lessons of the Gulf War was made more difficult by the change in the strategic landscape. A second order effect of this change was the diversion of resources from the lessons process. The uncertain future and increasing operations tempo frustrated attempts to thoroughly reflect on the impacts of the Gulf War. Perhaps the view that the Gulf War was the last battle of the Cold War, as opposed to the first engagement of a new world order, would prove useful in assessing its lessons. The ability to maintain a sense of focus is essential in transiting observations through a lessons model.

In the examination of the cases, the intergration of lessons back into the army in the field was a common shortcoming. While a practical soldier measures success on the battlefield by achieving victory, an additional method is required to identify doctrinal shortfalls. In the peacetime army, the evaluation of training exercises is the vehicle that accomplishes this action. In wartime, an additional system to monitor the integration of lessons into the field army is needed, in addition to a reassessment of

performance in the next battle. The U.S. Army in Italy exemplifies this condition. Lessons were collected, analyzed, and disseminated back to the theater, but not all units incorporated the tactical changes based on previous experience.

Similar results were avoided by the U.S. Army in the Gulf War through the proactive distribution of CALL newsletters and cross-talk between units. The short duration of the conflict did not sufficiently measure whether these actions would complete the integration process. For future operations, the integration of lessons should be a matter of command interest, and CAAT teams should prioritize and evaluate the adoption of previous lessons. The measure of success in the integration of previous observations is not a call for blind adherence, but rather an assessment of a unit making an informed decision.

In the survey of all the cases studies, a common tendency that observations often oriented on the performance of specific pieces of equipment was noted. One explanation for the technological bent in all the cases may be a reflection of the "western way of war." The problem with focusing on matters of equipment is that it provides short term solutions, but does not address long term problems. By replacing or modifying a single piece of equipment, an army is simply putting a band-aid on the problem, which may reflect a more fundamental change to the nature of the battlefield.

Using the performance of the U.S. Army model during the Gulf War as a measure of the current lessons system, it is apparent that the Army possesses a means to translate wartime tactical lessons to evolving doctrine. The products of the system may be seen to resemble a shotgun blast more than a laser beam. At the lower end of the system, the

collection and process phases performed by CALL represent the state of the art in a lessons model. The quality changes as the army enters the analyze phase. Under the wartime program, the capability exists to synthesize the lessons of the battlefield, provided the Army underwrites the results. Additional emphasis is needed to coordinate the efforts of the Army historical community with the lessons model. The involvement of senior leadership is needed during the analysis portion, to provide a sense of focus to the overall effort. The dissemination phase is currently a weak area, but a system for tracking DTOML issues from CALL through HQ TRADOC will be implemented shortly.[92] These measures monitor the lesson from the doctrine developers back to the tactical unit.

The issue of testing the reintegration of lessons with the unit remains problematic. The current system works, but it is important to remember that to be effective it must be allowed to function. As an anonymous British officer warned in 1902:

> ...in the past the value and the importance of the study have not been recognized, either by the military authorities or by the mass of officers; and owing to the small number of students [of lessons] the conclusions deduced have been rather the dicta of individuals than general assent based on experience, sound reasoning, and military common-sense.[93]

ENDNOTES

1. J.F.C. Fuller, The Army in My Time (London, Rich & Cowan LTD., 1935), 35-36.

2. Michael Howard, "Military Science in an Age of Peace," Journal of the Royal United Service Institution 119 (March 1974): 3-9.

3. Michael Howard, "The Use and Abuse of Military History," Journal of the Royal United Service Institution 625 (February 1962): 10.

4. Center for Army Lessons Learned, "Learning Lessons in a Force Projection Army" CALL Newsletter No. 93-2 (May 1993): 2.

5. Jay Luvaas, "Lessons and Lessons Learned", The Lessons of Recent Wars in the Third World (Lexington: Lexington Books, 1985), 54.

6. Headquarters, Department of the Army, "Army Lessons Learned Program: System Development and Application", AR 11-33 (10 October 1989): 10.

7. Fuller, The Army in My Time, 36.

8. For a complete narrative history of the development of the Army lessons program see: Dennis J. Vetock, Lessons Learned: A History of US Army Lesson Learning (Carlisle Barracks: US Army MHI, 1988)

9. CALL, "Learning Lessons in a Force Projection Army", 2.

10. Ibid. 7.

11. Anonymous, "War as a Teacher of War," The United Service Magazine 6 (June 1902): 630.

12. Bruce W, Menning, Bayonets before Bullets: The Imperial Russian Army, 1861-1914 (Bloomington: Indiana University Press, 1992), 215.

13. Ibid., 201. The process of adapting the lessons of the 1973 October War by the U.S. Army reached a similar mark. General William E. DePuy, at the time Commanding General, U.S. Army Training and Doctrine Command, instituted a series of doctrinal initiatives over a two and a half year period beginning July, 1974. See Paul H. Herbert, Deciding What Has to be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations (Fort Leavenworth: Combat Studies Institute, 1988), 30.

14. Lothar Rendulic, Mistakes in Deducing War Experiences (Historical Division European Command, P-118, 10 October, 1951): 3.

15. Herbert, Deciding What Has to be Done, 30.

16. Anonymous, "War as a Teacher of War," 609.

17. C. Vann Woodward, The Future of the Past (New York: Oxford University Press, 1989), ix.

18. Matthew Cooper, The German Army: 1933-1945 (Chelsea: Scarborough House, 1978), 178.

19. Williamson Murray,"The German Response to Victory in Poland," Armed Forces and Society 2 (Winter 1981). Also see reference to German self criticism in: Joseph J. Collins, "Desert Storm and the Lessons of Learning," Parameters 3 (Autumn 1992): 94.

20. War Department, Military Intelligence Division, "The German Campaign in Poland," Special Bulletins From the Active Campaign in Europe 1 (6 October 1939): 1.

21. Cooper, The German Army: 1933-1945, 164-165.

22. Robert A. Doughty, The Breaking Point: Sedan and the Fall of France, 1940 (Hamden: Archon Books, 1990), 19.

23. Erich von Manstein, Lost Victories (Novato: Presidio Press, 1985), 62.

24. F.W. von Mellenthin, Panzer Battles (Norman: University of Oklahoma Press, 1956), 7.

25. Murray,"The German Response to Victory in Poland," 291-292.

26. Rendulic, Mistakes in Deducing War Experiences, 3-4.

27. Murray,"The German Response to Victory in Poland," 291.

28. Cooper, The German Army: 1933-1945, 162-165.

29. Murray,"The German Response to Victory in Poland," 286. Further discussion of internal criticism of the German Army, see: S.J. Lewis, "Reflections on German Military Reform," Military Review LXVII (August 1988), 60-69.

30. Carlo D'Este, Bitter Victory: The Battle for Sicily, 1943 (New York: Harper Collins Publishers, 1989), 551.

31. Albert N. Garland and Howard McGaw Smyth, Sicily and the Surrender of Italy (Washington D.C.: U.S. Government Printing Office, 1965), 10.

32. Dennis J. Vetock, Lessons Learned: A History of U.S. Army Lesson Learning (Carlisle Barracks: U.S. Army Military History Institute, 1988), 61.

33. Ibid., 63.

34. Ibid., 62.

35. Each unit articulated lessons learned in their own respective format. Some contained a specific lessons learned section, while others rolled up lessons as part of the commanding officer's comments.

36. Headquarters, 3d Infantry Division, Operations Report: Sicilian Operation, 10 September 1943.

37. Ibid., 1.

38. D'Este, Bitter Victory, 552.

39. Examples of tactical problems identified in the campaigns in Italy that would assist in planning for Operation Overload included problems in the execution of the 82d Airborne Division assault on Sicily, control of naval gun fire, and traffic management during an amphibious assault. See: Headquarters, Seventh Army, Office of the Engineer, Engineer Report: Sicilian Campaign, 18 September 1943 and Headquarters, Provisional Corps, Seventh Army, Historical Record: Report of Operations, 15 July - 20 August 1943.

40. Vetock, Lessons Learned, 73.

41. Headquarters, 3d Infantry Division, Operations Report: Sicilian Operation, 10 September 1943, 1-2. MG Truscott's observations were related to the specific nature of the Sicilian campaign.

42. Headquarters, Seventh Army, Office of the Engineer, Engineer Report: Sicilian Campaign, 18 September 1943.

43. Headquarters, U.S. Army Armored School, 2d Armored Division in Sicily, May 1950, 72-73.

44. Garland and Smyth, Sicily and the Surrender of Italy, 5.

45. Vetock, Lessons Learned, 66.

46. The discussion of adding a fourth infantry regiment to the organization of the base Infantry Division illustrates this point. The demands of infantry combat in the MTO and ETO were stretching the limits of the current organizational structure. The addition of a fourth regiment offered the potential to rotate units for a rest period. See Vetock, Lessons Learned, 66-67.

47. Jay Stone, The Boer War and Military Reforms (New York: University Press of America, 1988), 4.

48. Larry H. Addington, The Patterns of War Since the Eighteenth Century (Bloomington: Indiana University Press, 1984), 113.

49. The British Army did not develop a general staff system or "modern" field staff until after the war. The system used by Lord Roberts would have been familiar to a British officer on the field of Waterloo. See Byron Farwell, The Great Anglo-Boer War (New York: Harper and Row, 1976), 268-269.

50. Royal Commission on the War in South Africa, Report of Commission: Minutes of Evidence taken before the Royal Commission on the War in South Africa, Vol. 1 (London: His Majesty's Stationery Office, 1903), 8-9. The Royal Commission explored in great detail the comparison of the German Army staff model with the staff model then in use by the British Army.

51. Ibid., iii.

52. B.F.S. Baden-Powell, War in Practice (London: Isbister and Company, 1903), 13. Examples of other works by "amateur critics" include: Anonymous, The Absent Minded War: Being Some Reflections on Our Reverses and the Causes which Have Led to Them by a British Officer (London, John Milne, 1900) and Jean de Bloch,"The Transvaal War: Its Lessons in Regard to Militarism and Army Re-organisation," Jean de Bloch: Selected Articles (Fort Leavenworth, CGSC Press, 1993)

53. Chief among this criticism is the failure to appreciate the effects of firepower on the capability to conduct battlefield maneuver. The British Army was not alone in this respect, as all participants were condemned for a similar failure.

54. Bloch,"The Transvaal War", 44-46.

55. Ibid., 51. Bloch argued that while problems existed within the British Army, they were rendered inconsequential by the changed condition of warfare at large.

56. Stone, The Boer War and Military Reforms, 107-111.

57. Royal Commission, Report of Commission, Vol. 1, 215-216.

58. Bloch,"The Transvaal War", 48-49.

59. Royal Commission, Report of Commission, Vol. 1, 8.

60. Stone, The Boer War and Military Reforms, 121-122. The difficulties in linking lessons to tactical doctrine led the army to create a Director General of Military Training in 1902.

61. Harry G. Summers, On Strategy II: A Critical Analysis of the Gulf War (New York: Dell Publishing, 1992), 1.

62. Center for Army Lessons Learned,"Fratricide: Reducing Self-Inflicted Losses" CALL Newsletter No. 92-4 (April 1992).

63. Combined Arms Command History Office, USACAC Annual Command History, 1991, (Fort Leavenworth: U.S. Army Combined Arms Command, 1992) 68-69.

64. Michael J. Mazarr, Don M. Snider, James A. Blackwell, Jr., Desert Storm: The Gulf War and What We Learned (Boulder: Westview Press, 1993), 87-89.

65. Bob Woodward, The Commanders (New York: Star Books, 1992), 291. The Combat Studies Institute (CSI) reprinted Albert Toppe, Desert Warfare: German Experiences in World War II (Fort Leavenworth: CGSC Press, 1991) and furnished copies to tactical units in theater.

66. Congress, House, House Armed Services Committee, Defense for a New Era: Lessons of the Persian Gulf War, (Washington D.C.: Government Printing Office, 30 March 1992), vi.

67. CAC History Office, USACAC Annual Command History, 1991, (Fort Leavenworth: U.S. Army Combined Arms Command, 1992), 68-69.

68. Ibid., 69.

69. Ibid., 19. The USACAC history describes the use of the Battle Command Training Program personnel to augment staffs at VIIth and XVIIIth Corps.

70. Call dispatched observers to theater with the first arriving on 13 January 1991, ultimtely 65 SME's were in the KTO. The emphasis given these teams was recording observations with little or no analysis as rapidly as possible after hostilities.

71. CALL, "Learning Lessons in a Force Projection Army", 5.

72. Desert Storm Special Study Group, VCSA Message, Subject: Development of After Action Report for Operations Desert Shield and Storm, Dated 18 March 1991.

73. CALL, Letter, Subject: After Action Report for Desert Shield/Desert Storm, Dated 26 February 1992. The letter is attached to the Tait Report and states that the material is to be treated as "close-hold." Confusion still exists, to this date, over the status of the Tait study.

74. Desert Storm Special Study Group, Administrative Data to AAR for Desert Shield/Desert Storm, Dated 16 October 1991.

75. CAC History Office, USACAC Annual Command History, 1991, (Fort Leavenworth: U.S. Army Combined Arms Command, 1992), 247-248. The Swain narrative may be published shortly by the CGSC Press. The reasons for the delay in publishing the document by CMH remain outside the scope of this study. One may speculate that at the heart of it is the question of the utility of historic studies to the serving officer.

76. Robert H. Scales, Certain Victory: The U.S. Army in the Gulf War, (Washington D.C.: Office of the Chief of Staff, 1993). The author heard this comment made several times while working with the Swain study and in research for this monograph. It came to light most recently, while discussing the role of the historian in the Lessons Learned System with personnel at CALL.

77. As told to the author by Colonel Richard M. Swain, 3d Army Historian. CALL observers were present at the meeting and taped the proceedings, which ultimately became part of the material gathered by the Tait study.

78. Desert Storm Special Study Group, Administrative Data to AAR for Desert Shield/Desert Storm, Dated 16 October 1991, 1-2.

79. Ibid., 2.

80. Scales, Certain Victory, 385.

81. Headquarters, Department of the Army, FM 100-5, Operations (Fort Monroe: U.S. Army Training and Doctrine Command, June 1993), 2-4, 2-9, 2-17, 3-1, 3-2, 3-7, 5-1, 6-9, 6-10, 6-16, 6-17.

82. Ibid. Examples include war termination and theater missile defense.

83. CAC History Office, USACAC Annual Command History, 1991, 18. Reportly, the reluctance to support the collection effort included prohibiting CALL observers from entering the theater.

84. Ibid., 71.

85. The copy of the report located at the Combined Arms Research Library is treated as "close-hold" material based on an LOI dated 26 February 1992. Personnel at CALL stated to the author that the Tait Report had been released to Major Subordinate Commands (MSC) in late spring 1993. When questioned about the delay in releasing the report, individuals at CALL attributed it to concern over the public media reaction.

86. Headquarters, Department of the Army, "Army Lessons Learned Program: System Development and Application", AR 11-33 (10 October 1989): 4-5. The regulation charges CMH to publish historical lessons with priority given to events which have a current applicability to potential contingency operations. Additionally, the regulation implies that the historical efforts should be closely tied to the overall lessons process. The Center for Military History commissioned the Swain study and a second narrative by its own historians - neither has been published to date. Several histories addressing individual pieces of the Gulf War have been published. See: U.S. Army Training and Doctrine Command, Office of the Command Historian, TRADOC Support to Operations Desert Shield and Desert Storm: A Preliminary Study (Fort Monroe: USATRADOC, 1992).

87. See U.S. Army Training and Doctrine Command, TRADOC Pamplet 525-100-2, Leadership and Command on the Battlefield (Fort Monroe: USATRADOC, 1993).

88. Michael Howard, The Lessons of History (New Haven: Yale University Press, 1991), 16.

89. Peter Grier, "U.S. Military Using Gulf War Textbook", The Christian Science Monitor 83 (15 May 1991): 9.

90. Murray, "German Respose to Victory", 286.

91. Ibid., 287.

92. CALL, "Briefing Slides", Lessons Learned: The Linkage to Doctrinal Change (Fort Leavenworth: USACAC, 1993)

93. Anonymous,"War as a Teacher of War", 630.

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